

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the applications:

Listing of Claims:

Claims 1-61 (canceled)

62. (previously presented) A protein comprising

(a) a human tumor necrosis factor (TNF)-binding soluble fragment of an insoluble human TNF receptor, wherein the insoluble human TNF receptor (i) specifically binds human TNF, (ii) has an apparent molecular weight of about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, and (iii) comprises the amino acid sequence LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10); and

(b) all of the domains of the constant region of a human immunoglobulin IgG heavy chain other than the first domain of said constant region;
wherein said protein specifically binds human TNF.

Claims 63-101 (canceled)

102. (previously presented) The protein of claim 62, wherein the soluble fragment comprises the peptides LCAP (SEQ ID NO: 12) and VFCT (SEQ ID NO: 8).

103. (previously presented) The protein of claim 102, wherein the soluble fragment further comprises the peptide LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10).

104. (canceled)

105. (previously presented) The protein of claim 62, wherein said human immunoglobulin IgG heavy chain is IgG₁.

106. (previously presented) A protein comprising

(a) a human tumor necrosis factor (TNF)-binding soluble fragment of an insoluble human TNF receptor, wherein the insoluble human TNF receptor (i) specifically binds human TNF, (ii) has an apparent molecular weight of about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, and (iii) comprises the amino acid sequences

LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10), LCAP (SEQ ID NO: 12), VFCT (SEQ ID NO: 8), NQPQAPGVEASGAGEA (SEQ ID NO: 9) and VPHLPAD (SEQ ID NO: 13),

wherein the soluble fragment comprises the peptides LCAP (SEQ ID NO: 12) and VFCT (SEQ ID NO: 8); and

(b) all of the domains of the constant region of a human IgG₁ heavy chain other than the first domain of the constant region;

wherein said protein specifically binds human TNF.

107. (previously presented) A recombinant protein encoded by a polynucleotide which comprises two nucleic acid subsequences,

(a) one of said subsequences encoding a human TNF-binding soluble fragment of an insoluble human TNF receptor protein having an apparent molecular weight of about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel, said soluble fragment comprising a the amino acid sequence LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10), and

(b) the other of said subsequences encoding all of the domains of the constant region of the heavy chain of a human IgG immunoglobulin other than the first domain of said constant region,

wherein said recombinant protein specifically binds human TNF.

Claims 108 and 109 (canceled)

110. (previously presented) The protein of claim 107, wherein the soluble fragment comprises the peptides LCAP (SEQ ID NO: 12) and VFCT (SEQ ID NO: 8).

111. (previously presented) The protein of claim 110, wherein the soluble fragment further comprises the peptide LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10).

112. (canceled)

113. (previously presented) The protein of any one of claims 107, 110 or 111, wherein said human immunoglobulin heavy chain is IgG₁.

114. (previously presented) A pharmaceutical composition comprising the recombinant protein of any of claims 62, 107, 134 or 135 and a pharmaceutically acceptable carrier material.

Claims 115-118. (canceled)

119. (previously presented) The protein of claim 62, wherein the protein is purified.

120. (previously presented) The protein of claim 62, wherein the protein is produced by CHO cells.

121. (previously presented) The protein of claim 62, wherein the protein consists of (a) the soluble fragment of the receptor and (b) all of the domains of the constant region of the human immunoglobulin IgG₁ heavy chain other than the first domain of the constant region.

122. (canceled)

123. (previously presented) The protein of claim 62, wherein said domains of the constant region of the human immunoglobulin heavy chain consist essentially of the immunoglobulin amino acid sequence encoded by pCD4H γ 1 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5314) or by pCD4-H γ 3 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5523).

124. (previously presented) The protein of claim 105, wherein said domains of the constant region of the human immunoglobulin heavy chain consist essentially of the immunoglobulin amino acid sequence encoded by pCD4H γ 1 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5314).

125. (previously presented) The protein of claim 106, wherein the protein is purified.

126. (previously presented) The protein of claim 106, wherein the protein is produced by CHO cells.

127. (previously presented) The protein of claim 106, wherein the protein consists of (a) the soluble fragment of the receptor and (b) all of the domains of the constant region of the human IgG₁ heavy chain other than the first domain of the constant region.

128. (previously presented) The protein of claim 106, wherein the soluble fragment further comprises the peptide LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10).

129. (previously presented) The recombinant protein of claim 107, wherein the recombinant protein is purified.

130. (previously presented) The recombinant protein of claim 107, wherein the recombinant protein is produced by CHO cells.

131. (previously presented) The recombinant protein of claim 107, wherein the protein consists of (a) the soluble fragment of the receptor and (b) all of the domains of the constant region of the human IgG₁ heavy chain other than the first domain of the constant region.

132. (previously presented) The protein of claim 107, wherein said domains of the constant region of the human immunoglobulin heavy chain consist essentially of the

immunoglobulin amino acid sequence encoded by pCD4H γ 1 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5314) or by pCD4-H γ 3 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5523).

133. (previously presented) The protein of claim 113, wherein said domains of the constant region of the human immunoglobulin heavy chain consist essentially of the immunoglobulin amino acid sequence encoded by the DNA insert of pCD4H γ 1 vector (deposited at Deutschen Sammlung von Mikroorganismen und Zellkulturen GmbH (DSM) in Braunschweig, FRG under No. DSM 5314).

134. (previously presented) A protein consisting of

(a) a human tumor necrosis factor (TNF)-binding soluble fragment of an insoluble human TNF receptor, wherein the insoluble human TNF receptor (i) specifically binds human TNF, and (ii) has an apparent molecular weight of about 75 kilodaltons on a non-reducing SDS-polyacrylamide gel and (iii) comprises the amino acid sequence LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10),

wherein the soluble fragment comprises the peptides LCAP (SEQ ID NO:12) and VFCT (SEQ ID NO:8), and

(b) all of the domains of the constant region of a human IgG₁ heavy chain other than the first domain of the constant region,

wherein the protein specifically binds human TNF, and

wherein the protein is produced by CHO cells.

135. (previously presented) The protein of claim 134, wherein the soluble fragment comprises the peptide LPAQVAFXPYAPEPGSTC (SEQ ID NO: 10).

136. (previously presented) The protein of claim 134, wherein the protein is purified.

137. (previously presented) A pharmaceutical composition comprising the recombinant protein of claim 105 and a pharmaceutically acceptable carrier material.

138. (canceled)

139. (previously presented) A method of binding human TNF *in vivo* comprising the step of administering to a subject the pharmaceutical composition of claim 137.

140. (currently amended) A protein comprising

(a) a human tumor necrosis factor (TNF) binding soluble fragment of the amino acid sequence encoded by the cDNA insert of the plasmid deposited with the ATCC on October 17, 2006 under accession number PTA 7942; and

(b) all of the domains of the constant region of a human immunoglobulin IgG heavy chain other than the first domain of said constant region;

wherein said protein specifically binds human TNF.

141. (previously presented) The protein of claim 140 consisting of the soluble fragment and all the domains of the constant region of the human immunoglobulin IgG heavy chain other than the first domain of said constant region.

142. (previously presented) The protein of claim 140

wherein the protein is expressed by a mammalian host cell.

143. (previously presented) The protein of claim 142, wherein the mammalian host cell is a CHO cell.

144. (previously presented) The protein of claim 142 consisting of the soluble fragment and all the domains of the constant region of the human immunoglobulin IgG heavy chain other than the first domain of said constant region.